

AMENDMENTS TO THE SPECIFICATION

Please replace the second paragraph after the heading “Best Modes For Carrying Out The Invention” on page 17 of the specification with the following amended paragraph:

As a correlation between two events, an interaction between substances in a living body, such as proteins, LMW compounds, and DNA is considered. In the following embodiment, data about interactions between “LMW compounds” and “proteins” is handled as the two events that are considered. The term “interaction data” herein refers to information about whether or not there is data about complexes between LMW compounds and proteins in the Protein Data Bank (PDB, <http://www.pdb.org>), and experimentally measured data showing the degree of binding between LMW compounds and proteins. Feature data about proteins includes the information in various external databases and the calculated results of clustering. It includes, for example, the IDs in SWISSPROT (<http://www.expasy.ch/sprot>), the clustering results based on amino acid sequence homology, the annotation information based on Gene Ontology (<http://www.geneontology.org>), and solubilities in a solvent. Feature data about LMW compounds include the names of molecules, molecular weights, therapeutic category, and other various molecular characteristic values, such as charge distribution, hydrophilic or hydrophobic property, three-dimensional structure, the number of donors or acceptors for hydrogen bond, and the kind and number of functional groups.

Please replace the first paragraph following the heading “(Embodiment 2)” on page 29 of the specification with the following amended paragraph:

With reference to this embodiment, how knowledge useful for the creation of drugs is extracted by rearranging interaction data and visualizing the result of analysis of resultant clusters is described. As an interaction between two events, the binding strength between proteins and LMW compounds is considered. The values of the binding strengths are the dissociation constants acquired from the Protein-Ligand Database (<http://www.mitchell.ch.cam.ac.uk/pld/>), each of which is described in literature. When only

those binding strengths with dissociation constants of 10^{-5} or smaller are extracted, the interaction information can be described as a matrix consisting of 95 kinds of LMW compounds and 67 kinds of proteins.

Please replace the first paragraph after the heading “(Embodiment 3)” on page 33 with the following amended paragraph:

With reference to Fig. 14, a method for extracting attributes commonly possessed by compounds or proteins from a cluster obtained on the basis of interaction is described, with regard to a case where the attributes of the compounds or proteins are expressed by a profile consisting of a plurality of elements. Fig. 14 shows an expression profile matrix 1402 in a cell tissue, which is obtained as an attribute of proteins, and an adverse event matrix 1403, which is obtained as an attribute of LMW compounds, both of which are shown in proximity to a matrix 1401 of interactions between LMW compounds and proteins. The proteins are designated by P1 to P7, cell tissues by T1 to T7, LMW compounds by C1 to C6, and adverse events by S1 to S5. The protein-protein interaction matrix may be obtained experimentally or from literature. The adverse event matrix can be obtained by examining whether or not the individual terms in the Medical Dictionary for Regulatory Activities (MeDRA), which is an international medical dictionary, appear within the items in, for example, a database of Japanese drugs (<http://www.japic.or.jp/publications/index3.html>) relating to adverse events.